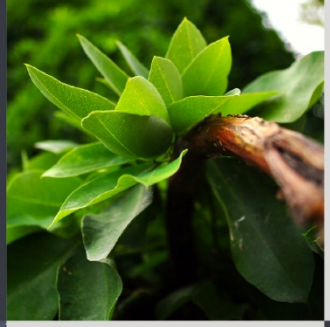
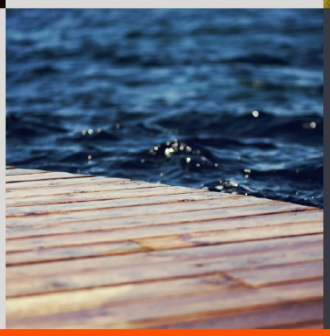


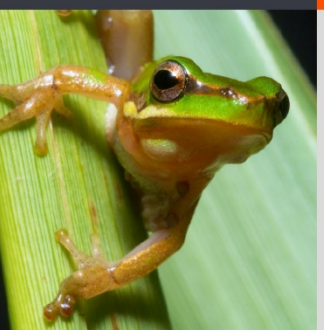


VISUAL IMPACT ASSESSMENT

No. 2924-3222 Kyogle Road, Kunghur

NCV Enterprises Pty Ltd
By Planit Consulting

November 2020



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Document Control

Issue	Date	Description	Prepared By	Checked By
A	29 Apr 19	Visual Impact Assessment for Concept	JA	DM
B	28 Oct 20	Visual Impact Assessment Revision	DM	JT

Terms & Abbreviations

Aesthetic	A general term referring to visual appearance and its human perception.
Baseline conditions	Description of the existing situation in the area of interest.
Cross Section	A vertical view drawn at right angles to the control line, showing the existing ground and various elements that make up the landscape.
Enhancement	Landscape improvement through restoration, reconstruction or creation
Fauna	Refers to animals, both individually and collectively.
Flora	Refers to plants, both individually and collectively.
KLVP	Key Local Vantage Point, A local location selected for Investigation based on desktop analysis Referenced as KLVP1, KLVP2 etc
KRVP	Key Regional Vantage Point. A regional location selected for investigation based on desktop analysis. Referenced as KRVP1, KRVP2 etc.
Landscape	A holistic term that encompasses visual, ecological and cultural values of the physical landscape.
Landscape Character	The distinct & recognizable pattern of elements that occurs consistently in a particular type of landscape, and how this is perceived by people. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement. It creates the particular sense of place of different areas of the landscape.
Landscape Effects	Change on the elements, characteristics, character and qualities of the landscape as a result of development. These effects can be positive or negative.
Landscape Factor	A circumstance of influence contributing to the impression of a landscape (scale, enclosure elevation)
Landscape Resource	The Combination of elements that contribute to landscape context, character & value.
Landscape Sensitivity	The extent to which a landscape can accept change of a particular type and scale without unacceptable adverse effects on its character.
Nature	All aspects of nature, including but not limited to: a. ecosystems and their constituent parts b. all natural and physical resources c. natural dynamic processes, and d. the characteristics of places, however large or small, that contribute to their biological diversity and integrity, or their intrinsic or scientific value
PDA	Proposed Developable Areas
PSH	Proposed Structure Heights. The maximum height of the proposed structures proposed within the subject site Proposed Structure Heights (PSH): 8 m (Max) above Natural Ground Level
Scenic Amenity	A measure of the relative contribution of each place in the landscape to the collective appreciation of open space as viewed from places that are important to the public
Screen Planting	The intentional use of landscape planting to visually screen adjoining uses and structure or views of these.
Visual Amenity	The degree of positive or negative factors associated with viewing a particular structure or proposal.
Visual Catchment	Visual catchments are areas bound by a shared viewing exposure from a particular vantage point or location on the ground plane.

Visualization	Computer simulation, photomontage or other technique to illustrate the appearance of a development.
Visual Effect	Change in the appearance of the landscape as a result of development. This can be positive (i.e. Beneficial or an improvement) or negative (ie. Adverse or a detraction).
VIA	Visual Impact Assessment
VCA | VC	Visual Catchment Area, Referenced as VC1, VC2 etc
The Site / Subject Site	2954 – 3224 Kyogle Road, Nightcap. The subject site is a combination of 21 No. individual allotments.

1.0 Introduction

Planit Consulting has been commissioned by NCV Enterprises Pty Ltd to prepare a Visual Impact Assessment for multiple rural land sharing communities to be developed over 21x existing individual allotments generally identified as 2924,2954, 2984 and 3222 Kyogle Road, Kunghur and Mount Burrell. Refer to **Appendix 1** Concept Plan which shows the proposed siting of the Developable Areas (PDAs) across the subject site. This report has been prepared to evaluate the scenic amenity of the subject site and assess the potential visual impact of the proposed rural land sharing development within the area of investigation as defined within this report.

2.0 The Proposal

The proposal is the development of up to 392 residential dwellings across 313 Hectares of Proposed Developable Area (PDA) plus refuge / community facilities dispersed throughout the site comprising Nightcap on Minjungbul. (Refer **Appendix 2** for the Proposed concept Plan plus list of the Lot Areas/dwelling plot numbers). In total the Nightcap on Minjungbul rural land sharing development covers an area of 1,584.4 hectares.

Each PDA is comprised of the following:

- Internal Access Road;
- Residential dwellings to a maximum height of 8.0m
- Asset Protection Zone for each proposed dwelling site.

3.0 Limitations and Assumptions of Study

This report examines the current landscape and visual amenity of the study area through site inspections and desktop analysis of the area of investigation.

A field inspection of the study location and identified area of interest was conducted to determine amenity values in order to assess any potential visual impacts. This inspection exercise was to gain familiarity with the location and its landscape character and amenity values.

Whilst various data and information sources were utilised in association with this report, various data limitations are present in such documents. As such, these limitations would also be transferrable to the information within this current report. Global Mapper R15 based on Digital Elevation Model (DEM)The Digital Elevation Model (DEM) Grid LiDAR 2015 has been utilised for all topographic and viewshed mapping included within this report. Tweed Shire Council's Draft Scenic Landscape Strategy (currently on Public Exhibition) has also been used to assist with determining Key Vantage Points to be investigated within this report.

This report has been prepared based on information gathered from publicly available data, especially in relation to ground topography and height datum. Any proposed structure heights (PSH) for dwellings referenced within this visual assessment are based on the 8m maximum structure height as outlined in Schedule 5 of the “State Environmental Planning Policy (Primary Production and Rural Development)” 2019.

Final PSH of the dwellings in the PDA's will be determined based upon the proposed Nightcap on Minjungbul Architectural Design Guidelines and relevant considerations and controls such as Tweed Shire Council LEP and DCP as well as relevant State Policies.

In this way, although Planit Consulting has taken every precaution in the report preparation process to ensure data accuracy, Planit Consulting makes no representations or warranties about report suitability, accuracy or completeness for any particular purpose and disclaim all responsibility and all liability for all expenses, losses, damages and costs which may be incurred as a result of data being inaccurate or incomplete in any way and for any reason.

4.0 Objectives & Methodology

The objective of this report is to assess the potential impact of the proposed changes to the subject site and its surrounds in context with the scenic amenity of the local region. Key local and regionally significant vantage points (KRVP & KLVP) will be identified through both topographic and photographic studies. The potential visual impact of the proposal on the identified catchments have been be assessed and evaluated against recognised visual assessment principals.

To determine any potential visual impacts, it is necessary to define the visual catchment of the site. This has been undertaken utilising the following GIS Mapping Programs and associated data resources;

- Major Ridgeline Plan - Generated using Global Mapper R15 and AutoCad and based on Digital Elevation Model (DEM)The Digital Elevation Model (DEM) Grid LiDAR 2015
- Regional Viewshed Locations - Tweed Shire Council Scenic Landscape Strategy Draft (currently on Public Exhibition)

This mapping has been used to identify Key Regional Vantage Points (KRVP) and Key Local Vantage Points (KLVP) based on a number of criteria a) Proximity to subject site and b) Areas of elevated topography (Refer Section 8.0 Viewshed Analysis).

Particular emphasis has been placed on areas of existing residential development within a close proximity to the subject site and areas determined to be located within the visual catchment resulting from the PDA's. Verification of these KRVP's and KLVP's was made through desk top analysis and site inspections. Photographs have been recorded where relevant to investigate any potential visual impact of the subject sites proposed development works. Refer to **Appendix 5** for Photographic Record.

A qualitative assessment of visual impacts forms the second component of the assessment. The significance of impacts has been evaluated using a combination of landscape impacts and visual impacts, as defined below.

4.1 Landscape Impact

Landscape impacts refer to the relative capacity of the landscape to accommodate changes to the physical landscape of the type and scale proposed that would occur

as a direct result of the proposal, through the introduction of new features or loss/modification of existing features.

Impacts have been assessed from identified viewpoints (Key Vantage Points) and consider (through professional judgement) the scale of change including:

- The extent to which the change (modification, removal and / or addition) of landscape features alters the existing landscape character visible to each Key Vantage Point;
- The extent of area from which the effect is evident;
- The duration of the effect (short/medium/long term, permanent/temporary);
- The physical state (or condition) of the landscape and its intactness from visual, functional, and ecological perspective. This includes consideration of the condition of landscape elements (e.g. groups of features within the soft landscape including roadside planting, open space, creek lines, tree, bush blocks), or features (e.g. prominent eye-catching elements such as a distinctive building and/or its setting, significant mature specimen tree, lookout point, etc) and their contribution to landscape character. Individual features and elements make up the character of a place and influence how the landscape is experienced

Definitions used to describe this assessment are detailed in Table 1.0.

Landscape impact	Definition
Large	A substantial / obvious change to the landscape due to total loss of, or change to, elements, features or characteristics of the landscape. Would cause a landscape to be permanently changed and its quality diminished.
Moderate	Discernible changes in the landscape due to partial loss of, or change to the elements, features or characteristics of the landscape. May be partly mitigated. The change would be out of scale with the landscape, and at odds with the local pattern and landform and will leave an adverse impact on a landscape of recognised quality.
Small	Minor loss or alteration to one or more key landscape elements, features, or characteristics, or the introduction of elements that may be visible but may not be uncharacteristic within the existing landscape.
Negligible	Almost imperceptible or no change in the view as there is little or no loss of / or change to the elements, features or characteristics of the landscape. The existing landscape quality is maintained but be slightly at odds to the scale, landform and pattern of the landscape.

Table 1.0 Assessment of Landscape Impact (Source: Landscape Institute and Institute for Environmental Management and Assessment, 2002)

4.2 Visual Impact

Visual impacts arise from changes in available views of the landscape that occur as a result of the proposal. Visual impact is determined through the subjective assessment of sensitivity of the visual receptors (i.e. residents, outdoor recreational users) and the magnitude (scale) of the change in view. Sensitivity is dependent upon receptors' location; the importance of their view; their activity (i.e. working, recreational, or travelling through); expectations; available view; and the extent of screening of this view.

Factors that have been considered in assessing the response of receptors to changes in the visual amenity include:

- Interest in the visual environment and their distance/angle of view to the source of the impact;
- The extent of screening/filtering of the view;
- Magnitude of change in the view (i.e. loss/addition of features that change the view's composition);
- Integration of changes within the existing view (form, mass, height, colour and texture);
- Duration of the effect (temporary/permanent, intermittent/continuous)

Receptor sensitivity definitions used to describe this assessment have been outlined in Table 2.0.

Sensitivity	Definition
High	Occupiers of residential properties with long viewing periods, within close proximity to the proposed development
	Users of outdoor recreational area including nature reserves, and nature based recreation (walking, horse riding trails, water based activities such as swimming and fishing) where their attention is focused, in part, on the landscape and its amenity
	Communities that place value upon the landscape and enjoyment of views of their landscape setting
Medium	Outdoor workers who have a key focus on their work who may also have intermittent views of the Project Area
	Outdoor recreation users (i.e. sporting activities) where their attention is focused predominately on the activity being undertaken
	Occupiers of residential properties with long viewing periods, at a distance from or screened from the Project Area
Low	Road users in motor vehicles, trains or on transport routes that are passing through or adjacent to the study area and therefore have short term views
	Viewers indoor at their place of work

Sensitivity	Definition
Negligible	Viewers from locations where there is screening by vegetation or structures where only occasional screened views are available and viewing times are short
	Road users in motor vehicles, trains or on transport routes that are passing through/adjacent to the study area and have partially screened views and short viewing times

Table 2.0 Assessment of Receptor Sensitivity (Source: Landscape Institute and Institute for Environmental Management and Assessment, 2002)

4.3 Significance of Impact

For the purposes of this assessment, predicted impacts as a direct result of the proposal have been described according to their significance, which is a function of the magnitude of the impact and the sensitivity of the receptor as detailed in Table 3.0.

		Landscape Impact			
		Large	**Moderate**	**Small**	**Negligible**
Visual Sensitivity	**High**	Major Significance	High Significance	Moderate Significance	Minor Significance
	Medium	High Significance	Moderate Significance	Minor Significance	Not Significant
	Low	Moderate Significance	Minor Significance	Not Significant	Not Significant
	Negligible	Minor Significance	Not Significant	Not Significant	Not Significant

Table 3.0 Significance of Impact

5.0 Site Location & Study Area

The rural land share PDA's are dispersed throughout the area that comprises Nightcap on Minjungbul (~1,584.4 hectares total site area). Refer to **Appendix 1** for PDA Concept Plan. Given the large area of the proposed development site in comparison to the area of each PDA, the subject site as referenced within this report generally pertains to the collective PDA's and their immediate surrounds. This area shall be hereafter referred to as 'the site' or the 'subject site'.

The subject site consists of tracts of unimproved natural bushland, areas of eucalyptus plantations, rural allotments, dispersed dwellings and unimproved camping facilities. The areas of natural bushland are predominantly wet sclerophyll forest consisting predominantly of Tallow Wood, White Mahogany and Flooded Gum canopy trees.

The existing regional vegetation mapping (TVMP 2004) and Tweed Shire Council Environment Mapping notes the study area to containing Wet Sclerophyll Forest.

The study area / area of investigation for this landscape and visual impact assessment are identified as the viewing points from The Pinnacle and Blackbutt Lookouts in the Border Ranges National Park to the north west, Mt Warning Lookout in Wollumbin National Park to the north east, Kyogle Road Lookout to the south east and Kyogle Road to the southern boundary of the site. This area of investigation was determined through topographic study and through the identification of the Regional and Local KVP's being investigated as part of this report. The confines of this area of investigation will be further explained throughout this report through the investigation of each identified Regional and Local KVP.

Refer to **Appendix 1** for the Site Context Plan.

6.0 Proposed Structure Heights

The potential visual impact within the viewsheds from the surrounding Key Regional and Local Vantage Points of the proposed development will be predominantly determined by the extents of clearing within the PDA's plus the subject site's topography, and to a much lesser extent the Proposed Structure Heights (PSH) of the small scale dwellings within the PDA's.

Within the PDA's, as per the maximum structure heights as outlined in Schedule 3 of the "State Environmental Planning Policy (Primary Production and Rural Development)" 2019, the proposed structure heights (PSH) of the dwellings are to be capped at 8.0 m above existing natural ground height within the PDA's, considered generally low-rise and small-scale.

The following height values and associated AHD values utilised to determine PSH are as follows:

Proposed Individual Residential Dwellings

Individual Building Ground Height:	0.00m RL
Maximum Structure Height:	8.00m RL

Refer to the draft Architectural Design Guidelines accompanying the concept proposal.

NOTE: The visual assessment of individual structures within the PDA's has not been included in this report. The Visual Assessment of individual structures within each PDA will be the subject of later VIA reports.

7.0 Major Ridgeline Catchments | Site Topography

Visual catchments are areas bound by a shared viewing exposure from a particular vantage point or location on the ground plane. Visual catchment areas are defined largely by topography, the height of a particular point on the ground plane, relative to the surrounding area.

This is illustrated in Figure 1.0 below.

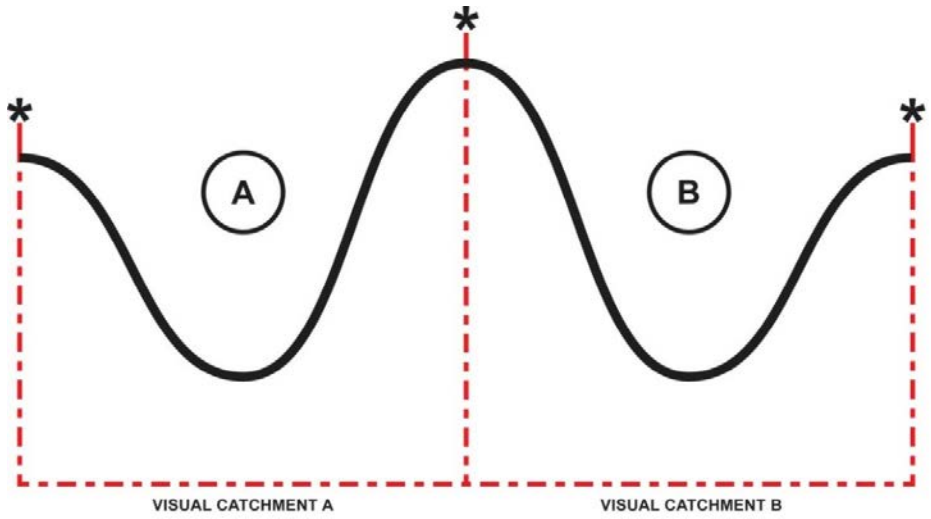


Figure 1.0: Visual Catchment Graph

This cross-sectional view illustrates 2x distinct Visual Catchments 'A' and 'B'. A particular land-use or structure that exist within Visual Catchment Area A is likely to be contained within the confines of Visual Catchment Zone A. Further, its impact may be visually obscured (or its impact lessened) from Visual Catchment B by the central rise in topography. The dominant ridgelines form the extents of a visual catchment (illustrated as an '*'on the above diagram).

This methodology for establishing major ridgeline catchment boundaries has been applied over the study area identified in section 5.0 of this report. Refer **Appendix 1** for Major Ridgeline Catchments Plan.

The Major Ridgeline Catchment Plan provides a base that will aid in determining the potential visual impact or exposure that the PDA's will have to surrounding view catchments. The various visual catchments determined through topographic analysis are illustrated on individual catchment zone plans from the Key Vantage points surrounding the subject site. 4x prominent Key Regional Vantage Points have been identified and are referenced throughout this report (KRVP1 to KRVP4) and 8x Key Local Vantage Points have been identified and are referenced throughout this report (KLVP1 to KLVP8). Refer to **Appendix 3** Key Regional Vantage Point Reference Plan and Key Local Regional Vantage Point Reference Plan.

As illustrated in the Major Ridgeline Catchment Plan, the subject site is divided along a prominent ridgeline referenced in **Appendix 1** Major Ridgeline Catchments as Ridgeline R1 with a number of less prominent ridgelines coming off it. This results in the subject site located on the intersection of 2x Visual Catchment Areas noted as VC1 and VC2.

8.0 Viewshed Analysis

As the proposed development is not a single point of development, but rather a series of Proposed Developable Areas across the subject site, the extents of the PDA's have been used in the Viewshed Analysis of both the Regional and Local Views rather than individual structures. A viewshed analysis for individual structures may be undertaken at a later stage when structure locations within each PDA has been determined.

As shown in **Appendix 1** Concept Plan, the extents of the PDA's within the subject site have been determined based upon numerous factors. These factors include:

- Land gradient;
- Existing vegetation conservation areas;
- Potential Water Storage dam levels

The PDA extents have been used to generate the limits for the viewshed analysis for both the Regional and Local Views. Refer to **Appendix 3** for Key Regional Viewshed Locations and **Appendix 4** for Key Local Viewshed Locations. This viewshed generation is based exclusively on topographic features (i.e. landform) and does not take into consideration screening mitigators such as existing or proposed vegetation. This is explored further in Section 9.0 Vantage Point Analysis.

As illustrated in the Concept Plan (refer **Appendix 1**), the total combined area of the PDA's (approximately 313 hectare) occupies approximately 19% of the subject site.

As displayed on the Major Ridgeline Catchments Plan within **Appendix 1**, the Major Ridgeline (R1) is the primary landform feature that affects the local viewsheds, and screens the majority of the proposal from view along the linear Kyogle Road viewshed. Based on this topographic desktop analysis it would be determined that existing residences located along Kyogle Road plus travellers along Kyogle Road will have restricted views of the total area of the PDA's. Within the viewshed, 98.4 hectares of PDA (approximately 47% of the PDA's), is located to the south of the Major Ridgeline in Visual Catchment 1.

Whilst the Major Ridgeline restricts the extent of local views, 'regional' viewsheds are present from vantage points that are at a greater distance and higher than the subject site. (Refer **Appendix 3** Regional Viewshed Locations).

This viewshed analysis has been used to identify Key Vantage Points for further investigation and will be referenced further in Section 9.0 Key Vantage Points & Analysis.

9.0 Key Vantage Points

Within the established investigation area, 4x Key Regional Vantage Points and 8x Key Local Vantage Points and have been selected for further investigation. Refer to **Appendix 3** for Key Regional Viewpoint Locations Plans and **Appendix 4** for Key Local Viewpoint Plans. These vantage points have been selected based on several factors including:

1) Proximity to subject site
2) Location along primary vehicular or pedestrian networks
3) Areas of elevated topography (based on findings within the Viewshed Analysis)
4) Photographic and site investigation
5) Land use (existing residential areas, retained natural bushland, eucalyptus plantations, recreational facilities)
6) Public use areas (public look outs)

Verification of these Key Vantage Points (KVP) was made through a combination of desk top analysis plus site inspections. Photographs have been recorded where relevant to provide a representation of typical views from visited KVP's toward the subject site. (Refer to **Appendix 5** for Photographic Record).

Topographic cross sections from selected KVP locations to the subject site have been generated using (DEM) Grid LiDAR 2015 / SRTM Elevation Data where required to effectively illustrate findings.

The Key Regional Vantage Points and Key Local Vantage Points are as follows:

Key Regional Vantage Points:

KRVP1. The Pinnacle Lookout (Priority 2 Viewshed as per draft SLS)
VP Location Coordinates: 28°24'19"S | 153°07'47"E
Approx. AHD Elevation (Google Earth): 1,014m
Approx. Distance from Subject Site 8015m

KRVP2. Mount Warning Lookout (Discounted viewshed within draft SLS)
VP Location Coordinates: 28°23'49"S | 153°16'20"E
Approx. AHD Elevation (Google Earth Data) 1074.0m
Approx. Distance from Subject Site 7260m

KRVP3. Blackbutt Lookout (Priority 2 Viewshed as per draft SLS)
VP Location Coordinates: 28°26'16"S | 153°08'37"E
Approx. AHD Elevation (Google Earth Data.): 807m
Approx. Distance from Subject Site 5374m

KRVP4. Kyogle Road Lookout (Priority 2 Viewshed as per draft SLS)
VP Location Coordinates: 28°31'06"S | 153°09'31"E
Approx. AHD Elevation (Google Earth Data.): 287.0m
Approx. Distance from Subject Site 4886m

Key Local Vantage Points:

KLVP1: Private Residence, Mandalay Road
VP Location Coordinates: 28°27'54.68"S | 153°14'26.08"E
Approx. AHD Elevation (Google Earth Data.): 108m
Approx. Distance from Subject Site 200m

KLVP2: Private Residence, Private Access Road
VP Location Coordinates: 28°28'19.23"S | 153°13'49.92"E
Approx. AHD Elevation (Google Earth Data.): 96.0m
Approx. Distance from Subject Site 150m

KLVP3: Private Residence, Private Access Road
VP Location Coordinates: 28°28'29.49"S | 153°13'48.83"E
Approx. AHD Elevation (Google Earth Data.): 98.0m
Approx. Distance from Subject Site 130m

KLVP4: Kyogle Road
VP Location Coordinates: 28°28'29.49"S | 153°13'48.83"E
Approx. AHD Elevation (Google Earth Data.): 95.0m
Approx. Distance from Subject Site 500m

KLVP5: Private Residence, Private Access Road
VP Location Coordinates: 28°28'43.73"S | 153°13'37.77"E
Approx. AHD Elevation (Google Earth Data.): 97.0m
Approx. Distance from Subject Site 150m

KLVP6: Kyogle Road (Priority 1 Viewshed as per draft SLS)
VP Location Coordinates: 28°29'26.42"S | 153°12'23.72"E
Approx. AHD Elevation (Google Earth Data.): 118.0m
Approx. Distance from Subject Site 490m

KLVP7: Private Residence, Mt Burrell Rd
VP Location Coordinates: 28°29'14.09"S | 153°12'59.16"E
Approx. AHD Elevation (Google Earth Data.): 126.0m
Approx. Distance from Subject Site 150m

KLVP8: Private Residence, Waratah Ct
VP Location Coordinates: 28°29'15.71"S | 153°13'19.36"E
Approx. AHD Elevation (Google Earth Data.): 105.0m
Approx. Distance from Subject Site 210m

9.1 Key Regional Vantage Points Analysis

9.1.1 Key regional Vantage Point 1 | The Pinnacle Lookout

1.Tweed Ranges Road, Border Ranges National Park
VP Location Coordinates: 28°24'19"S | 153°07'47"E
Approx. AHD Elevation (Google Earth 1,014m
Approx. Distance from Subject Site 8015m

Key Regional Vantage Point 1 is located to the north west of the subject situated within the Border Ranges National Park. This vantage point was selected for investigation given its elevation (1,014m) proximity to the site (8015m) and the potential views (determined by initial desktop analysis) toward the subject site.

Refer to **Appendix 3** KRVP1: The Pinnacle Lookout Static Viewshed.

Key Regional Vantage Point 1 Analysis

- Key Regional Vantage Point 1 is located to the north west of the subject site within the Border Ranges National Park at a distance from the subject site of 8015m. The RKVP has an elevation of AHD 1,014m which is approximately 789m higher than the AHD of the highest point of Ridgeline 1 (225m).

- Prominent Ridgeline R1 (refer to **Appendix 1** Major Ridgeline Catchments) is visible from KRVP1 and represents 1x of the prominent 'long-view' landscape features when viewing south-east from this location. Due to the higher elevation of KRVP1 in relation to R1, R1 does not act to screen any views from KRVP1 into Visual Catchment 1. This means PDA's to the south of R1 are visible from KRVP1. Refer to **Appendix 3** KRVP1: The Pinnacle Lookout Static Viewshed.

- The subject site DPA's comprise a 25^0 viewshed from KRVP1 (refer **Appendix 3** Key Regional Viewshed Locations). With a defined PSH of 8m above exiting ground levels, the visual impact of any small scale dwelling structures viewed will be minimal due to the distance from KRVP1 and the overall expanse of the viewshed from KRVP1.

- With a building density average of 1 small scale dwelling per 0.7 hectares within each PDA (1 small scale dwelling per 3.6 hectares averaged across the entire subject site), the density of the small scale dwellings viewed will be in keeping with the surrounding residential development densities when the subject site is viewed from KRVP1.

Summary | Significance of Impact

With reference to Table 2.0 Assessment of Receptor Sensitivity of KRVP1 is considered 'Medium'. Visitors to KRVP1, while likely to have long viewing periods across the site, will not be focusing on the DPA's due to the expanse of the views available. The proposed dwellings and PSH's will be in keeping with the surrounding developments and development pattern densities. Whilst minimal, the retention of existing

vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Visual Sensitivity from KRVP1.

The Landscape Impact would be considered 'Small', though minor loss with the introduction of elements that may be visible but may not be uncharacteristic within the existing landscape. Whilst minimal, the retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Landscape Impact from KRVP1.

As per below, the significance of the impact of the proposed development to KRVP1 is considered 'Minor Significance.

		Landscape Impact			
		Large	**Moderate**	**Small**	**Negligible**
Visual Sensitivity	**High**	Major Significance	High Significance	Moderate Significance	Minor Significance
	Medium	High Significance	Moderate Significance	Minor Significance	Not Significant
	Low	Moderate Significance	Minor Significance	Not Significant	Not Significant
	Negligible	Minor Significance	Not Significant	Not Significant	Not Significant

9.1.2 Key Regional Vantage Point 2 | Mt Warning Lookout

Wollumbin National Park
VP Location Coordinates: 28°23'49"S | 153°16'20"E
Approx. AHD Elevation (Google Earth Data.): 1074m
Approx. Distance from Subject Site 7260m

Regional Key Vantage Point 2 is located to the north northeast of the subject site within the Wollumbin National Park at a distance of approximately 7260m. The Mount Warning Lookout vantage point was selected for investigation given its elevation (1,074m), proximity to the site (7260m) and potential views (desktop analysis) toward the subject site. RKVP 2 is located at an AHD of 1,074m being 849m higher than the AHD of the highest point of Ridgeline 1.

Refer to **Appendix 3** KRVP2: Mount Warning Static Viewshed.

Key Regional Vantage Point 2 Analysis

- Key Regional Vantage Point 2 is located to the north/north-east of the subject site within the Wollumbin National Park at a distance from the subject site of 7260m. The RKVP has an elevation of AHD 1,074m which is approximately 849m higher than the AHD of the highest point of Ridgeline 1 (225m).

- Prominent Ridgeline R1 (refer to **Appendix 1** Major Ridgeline Catchments) is visible from KVP2 and represents 1x of the prominent 'long-view' landscape features when viewing south-west from this location. Due to the higher elevation of KRVP2 in relation to R1, R1 does not act to screen any views from KRVP2 into Visual Catchment 1. This means PDA's to the south of R1 are visible from KRVP2. Refer to **Appendix 3** KRVP2: Mt Warning Static Viewshed.

- The subject site DPA's comprise a 23^0 viewshed from KRVP2 (refer **Appendix 3** Regional Viewshed Locations). With a defined PSH of 8m above exiting ground levels, the visual impact of any small scale dwelling structures viewed will be minimal due to the distance from KRVP2 and the overall expanse of the viewshed from KRVP2.

- With a building density average of 1 small scale dwelling per 0.7 hectares within each PDA (1 small scale dwelling per 3.6 hectares averaged across the entire subject site), the density of the small scale dwellings viewed will be in keeping with the surrounding residential development densities when the subject site is viewed from KRVP2.

Summary | Significance of Impact

With reference to Table 2.0 Assessment of Receptor Sensitivity of KVP2 is considered 'Medium'. Visitors to KRVP2, while likely to have long viewing periods across the site, will not be focusing on the DPA's due to the expanse of the views available. The proposed dwellings and PSH's will be in keeping with the surrounding developments and development pattern densities. Whilst minimal, the retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Visual Sensitivity from KRVP2.

The Landscape Impact would be considered 'Small', through minor loss with the introduction of elements that may be visible but may not be uncharacteristic within the existing landscape. Whilst minimal, the retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Landscape Impact from KRVP2.

As per below, the significance of the impact of the proposed development to KRVP2 is considered 'Minor Significance.

		Landscape Impact			
		Large	**Moderate**	**Small**	**Negligible**
Visual Sensitivity	**High**	Major Significance	High Significance	Moderate Significance	Minor Significance
	Medium	High Significance	Moderate Significance	Minor Significance	Not Significant
	Low	Moderate Significance	Minor Significance	Not Significant	Not Significant
	Negligible	Minor Significance	Not Significant	Not Significant	Not Significant

In addition to the above findings, it is acknowledged that Wollumbin is a place of great spiritual significance to the Bundjalung People. Accordingly, whilst not diminishing the visual qualities and experience of the summit, visitors are asked to respect the wishes of the Bundjalung People and choose not to climb the summit track. Accordingly, the 'weighting' of this viewfield should be reduced given the intended limited use into the future.

9.1.3 Key Regional Vantage Point 3 | Blackbutt Lookout

Tweed ranges Road, Border Ranges National Park

VP Location Coordinates:	28°26'16"S | 153°08'37"E
Approx. AHD Elevation (Google Earth Data):	807m
Approx. Distance from Subject Site	5374m

Key Regional Vantage Point 3 is located to the north west of the subject situated within the Border Ranges National Park. This vantage point was selected for investigation given its elevation (807m) proximity to the site (5374m) and the potential views (determined by desktop analysis) toward the subject site.

Refer to **Appendix 3** KRVP3: Blackbutt Lookout Static Viewshed.

Key Regional Vantage Point 3 Analysis

- Key Regional Vantage Point 3 is located to the north west of the subject site within the Border Ranges National Park at a distance from the subject site of 5374m. The KRVP has an elevation of AHD 807m which is approximately 582m higher than the AHD of the mid-point of Ridgeline 1 (225m).

- Major Ridgeline R1 (refer **Appendix 1** Major Ridgeline Catchments) is visible from KVP3 and represents 1x of the prominent 'long-view' landscape features when viewing south-east from this location. Due to the higher elevation of KRVP3 in relation to R1, R1 does not act to screen any views from KRVP3 into Visual Catchment 1. This means PDA's to the south of R1 are visible from KRVP3. Refer to **Appendix 3** KRVP: Blackbutt Lookout Static Viewshed.

- The subject site DPA's comprise a 29^0 viewshed from KRVP3 (refer **Appendix 3** Regional Viewshed Locations). With a defined PSH of 8m above exiting ground levels, the visual impact of any small scale dwelling structures viewed will be minimal due to the distance from KRVP3 and the overall expanse of the viewshed from KRVP3.

- With a building density average of 1 small scale dwelling per 0.7 hectares within each PDA (1 small scale dwelling per 3.6 hectares averaged across the entire subject site), the density of the small scale dwellings viewed will be in keeping with the surrounding residential development densities when the subject site is viewed from KRVP3.

Summary | Significance of Impact

With reference to Table 2.0 Assessment of Receptor Sensitivity of KRVP3 is considered 'Medium'. Visitors to KRVP3, while likely to have long viewing periods across the site, will not be focusing on the DPA's due to the expanse of the views available. The proposed dwellings and PSH's will be in keeping with the surrounding developments and development pattern densities. Whilst minimal, the retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Visual Sensitivity from KRVP3.

The Landscape Impact would be considered 'Small', through minor loss with the introduction of elements that may be visible but may not be uncharacteristic within the existing landscape. Whilst minimal, the retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Landscape Impact from KRVP3.

As per below, the significance of the impact of the proposed development to KRVP3 is considered 'Minor Significance.

		Landscape Impact			
		Large	**Moderate**	**Small**	**Negligible**
Visual Sensitivity	**High**	Major Significance	High Significance	Moderate Significance	Minor Significance
	Medium	High Significance	Moderate Significance	Minor Significance	Not Significant
	Low	Moderate Significance	Minor Significance	Not Significant	Not Significant
	Negligible	Minor Significance	Not Significant	Not Significant	Not Significant

9.1.4 Key Regional Vantage Point 4 | Kyogle Road Lookout

Kyogle Road,

VP Location Coordinates:	28°31'06"S | 153°09'31"E
Approx. AHD Elevation (Google Earth Data):	287m
Approx. Distance from Subject Site	4886m

Key Vantage Point 4 is located to the south-west of the subject site along Kyogle Road. This vantage point was selected for investigation given its elevation (287m), proximity to the site (4886m) and potential views (determined by desktop analysis) toward the subject site.

Refer to **Appendix 3** for KRVP4: Kyogle Road Static Viewshed.

Image 1 below shows the view from Key Regional Vantage Point 4 towards the subject site.

Image 2.0: View of Subject Site from KRVP4: Kyogle Road Lookout

Key Regional Vantage Point 4 Analysis

- Key Regional Vantage Point 4 is located to the south west of the subject site along Kyogle Road at a distance from the subject site of4886m. The KRVP has an elevation of AHD 287m which is approximately 62m higher than the AHD of the mid-point of Ridgeline 1 (225m).

- Prominent Ridgeline R1 (refer to **Appendix 1** Major Regional Ridgeline Catchments) is visible from KVP4. However, as the Ridgeline R1 runs mainly in a south-west direction, Visual Catchments VC1 and VC 2 are visible.

- The subject site DPA's comprise a 29^0 viewshed from KRVP3 (refer **Appendix 3** Regional Viewshed Locations). With a defined PSH of 8m above exiting ground levels, the visual impact of any small scale dwelling structures viewed will be minimal due to the distance from KRVP4 and the overall expanse of the viewshed from KRVP4.

- With a building density average of 1 small scale dwelling per 0.7 hectares within each PDA (1 small scale dwelling per 3.6 hectares averaged across the entire

subject site), the density of the small scale dwellings viewed will be in keeping with the surrounding residential development densities when the subject site is viewed from KRVP4.

Summary | Significance of Impact

With reference to Table 2.0 Assessment of Receptor Sensitivity of KVP 4 is considered 'Medium'. Visitors to KRVP4, while likely to have long viewing periods across the site, will not be focusing on the DPA's due to the expanse of the views available. The proposed dwellings and PSH's will be in keeping with the surrounding developments and development pattern densities. Whilst minimal, the retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Visual Sensitivity from KRVP4.

The Landscape Impact would be considered 'Small', through minor loss with the introduction of elements that may be visible but may not be uncharacteristic within the existing landscape. Whilst minimal, the retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Landscape Impact from KRVP4.

As per below, the significance of the impact of the proposed development to KRVP4 is considered 'Minor Significance'.

		Landscape Impact			
		Large	**Moderate**	**Small**	**Negligible**
Visual Sensitivity	**High**	Major Significance	High Significance	Moderate Significance	Minor Significance
	Medium	High Significance	Moderate Significance	Minor Significance	Not Significant
	Low	Moderate Significance	Minor Significance	Not Significant	Not Significant
	Negligible	Minor Significance	Not Significant	Not Significant	Not Significant

9.2 Key Local Vantage Points Analysis

9.2.1 Key Local Vantage Point 1 | Private Residence, Mandalay Road

Private residence, Mandalay Road

VP Location Coordinates:	28°27'54.68"S | 153°14'26.08"E
Approx. AHD Elevation (Google Earth Data):	108m
Approx. Distance from Subject Site	200m

Key Local Vantage Point 1 is surrounded by the subject site to the east, north and west and is accessed from Kyogle Road to the south via Mandalay Road. This vantage point was selected for investigation given its elevation (108m), proximity to the site (200m) and potential views (determined by desktop analysis) toward the subject site.

Refer to **Appendix 4** for the plan showing the Local Viewshed from KLVP1 based upon Ground Surface Modelling only.

Key Local Vantage Point 1 Analysis

- Key Local Vantage Point 1 is surrounded by the subject site to the east, north and west. It is access from Kyogle Road to the south via Mandalay Road. The KLVP has an elevation of AHD 108m. which is approximately 117m lower than the AHD of the highest point of Ridgeline 1 (225m).
- KLVP1 is sited approximately 200m from the subject site at the closest point.
- The eastern end only of Major Ridgeline R1 (refer to **Appendix 1** Major Regional Ridgeline Catchments Plan) is visible from KLVP1 and only a portion of VC1 is viewable. This is due to the visual impact of the minor ridgelines that project southward from Major Ridgeline R1.
- No views to the north of Major Ridgeline 1 are visible.
- KLVP1 Plan shows only limited areas of DPA's are visible from KLVP1.
- With a building density average of 1 small scale per 0.7 hectares within each PDA (1 small scale dwelling per 3.6 hectares averaged across the entire subject site), minimal numbers of proposed small scale dwellings within the PDA's will be visible from KLVP1. Visibility of any proposed small scale dwellings will be further reduced when the locations of existing mature vegetation and potential development vegetation works are considered.

Summary | Significance of Impact

With reference to Table 2.0 Assessment of Receptor Sensitivity of KLVP1 is considered 'Medium' as "occupiers of residential properties with long viewing periods, at a distance from or screened from the Project Area". The proposed small scale dwellings and the PSH's will be in keeping with the surrounding developments and development pattern densities. The retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Visual Sensitivity from KLVP1.

The Landscape Impact would be considered 'Small', through minor loss with the introduction of elements that may be visible but may not be uncharacteristic within the existing landscape. Whilst minimal, the retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Landscape Impact from KLVP1.

As per below, the significance of the impact of the proposed development to KLVP1 is considered 'Minor Significance'.

		Landscape Impact			
		Large	**Moderate**	**Small**	**Negligible**
Visual Sensitivity	**High**	Major Significance	High Significance	Moderate Significance	Minor Significance
	Medium	High Significance	Moderate Significance	Minor Significance	Not Significant
	Low	Moderate Significance	Minor Significance	Not Significant	Not Significant
	Negligible	Minor Significance	Not Significant	Not Significant	Not Significant

9.2.2 Key Local Vantage Point 2 | Private Residence off Private Access Road, Kyogle Road

Private Residence, Private Access Road
VP Location Coordinates: 28°28'19.23"S | 153°13'49.92"E
Approx. AHD Elevation (Google Earth Data): 96m
Approx. Distance from Subject Site 150m

Key Local Vantage Point 2 is surrounded by the subject site to the east, north and west and is accessed from Kyogle Road to the south via a private access road. This vantage point was selected for investigation given its elevation (96m), proximity to the site (150m) and potential views (determined by desktop analysis) toward the subject site.

Refer to **Appendix 4** for the plan showing the Local Viewshed from KLVP2 based upon Ground Surface Modelling only.

Key Local Vantage Point 1 Analysis

- Key Local Vantage Point 2 is surrounded by the subject site to the east, north and west. It is accessed from Kyogle Road to the south via a private access road. The KLVP has an elevation of AHD 96m. which is approximately 129m lower than the AHD of the highest point of Ridgeline 1 (225m).

- KLVP2 is sited approximately 150m from the subject site at the closest point.

- Based upon the Ground Surface Modelling, only a small portion of 1x DPA is visible from KLVP2. This is due to the visual impact of the minor ridgelines that project southward from Major Ridgeline R1. The existing vegetation plus any

additional vegetation works between KLVP2 and the indicated DPA will screen the DPA from view from KLVP2.

- No views to the north of Major Ridgeline 1 are visible.

- With a building density average of 1 small scale dwelling per 0.7 hectares within each PDA (1 small scale dwelling per 3.6 hectares averaged across the entire subject site), minimal numbers of proposed small scale dwellings within the PDA's will be visible from KLVP2. Visibility of any proposed small scale dwellings will be further reduced when the locations of existing mature vegetation and potential development vegetation works are considered.

Summary | Significance of Impact

With reference to Table 2.0 Assessment of Receptor Sensitivity of KLVP2 is considered 'Negligible' as "Viewers from locations where there is screening by vegetation or structures where only occasional screened views are available". The proposed small scale dwellings and PSH's will be in keeping with the surrounding developments and development pattern densities. The retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Visual Sensitivity from KLVP2.

The Landscape Impact would be considered 'Negligible', as "Almost imperceptible or no change in the view as there is little or no loss of / or change to the elements, features or characteristics of the landscape". The retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Landscape Impact from KLVP2.

As per below, the significance of the impact of the proposed development to KLVP2 is considered 'Not Significant'.

		Landscape Impact			
		Large	**Moderate**	**Small**	**Negligible**
Visual Sensitivity	**High**	Major Significance	High Significance	Moderate Significance	Minor Significance
	Medium	High Significance	Moderate Significance	Minor Significance	Not Significant
	Low	Moderate Significance	Minor Significance	Not Significant	Not Significant
	Negligible	Minor Significance	Not Significant	Not Significant	Not Significant

9.2.3 Key Local Vantage Point 3 | Private Residence, Off Private Access Road, Kyogle Road

Private Residence, Private Access Road
VP Location Coordinates: 28°28'29.49"S | 153°13'48.83"E
Approx. AHD Elevation (Google Earth Data): 98m
Approx. Distance from Subject Site 130m

Key Local Vantage Point 3 is located to the east and south of the subject site to the west of Kyogle Road. This vantage point was selected for investigation given its elevation (98m), proximity to the site (130m) and potential views (determined by desktop analysis) toward the subject site.

Refer to **Appendix 4** for the plan showing the Local Viewshed from KLVP3 based upon Ground Surface Modelling only.

Key Local Vantage Point 3 Analysis

- Key Local Vantage Point 3 is surrounded by the subject site immediately to the west. It is access from Kyogle Road to the east via a private access road. The KLVP has an elevation of AHD 98m. which is approximately 127m lower than the AHD of the highest point of Ridgeline 1 (225m).

- KLVP3 is sited approximately 130m from the subject site at the closest point.

- Only a portion of Major Ridgeline R1 (refer to **Appendix 1** Major Regional Ridgeline Catchments) to the north west, north and north east is visible from KLVP3. This is due to the visual impact of the minor ridgelines that project southward from Major Ridgeline R1.

- No views to the north of Major Ridgeline 1 are visible.

- Based upon the Ground Surface Modelling, only a small portion of 2x PDA's are visible from KLVP3. The existing vegetation plus any additional vegetation works between KLVP3 and the indicated DPA will screen these DPA's from view from KLVP3.

- With a building density average of 1 small scale dwelling per 0.7 hectares within each PDA (1 small scale dwelling per 3.6 hectares averaged across the entire subject site), minimal numbers of proposed small scale dwellings within the PDA's will be visible from KLVP3. Visibility of any proposed small scale dwellings will be further reduced when the locations of existing mature vegetation and potential development vegetation works are considered.

Summary | Significance of Impact

With reference to Table 2.0 Assessment of Receptor Sensitivity of KLVP3 is considered 'Negligible' as "Viewers from locations where there is screening by vegetation or structures where only occasional screened views are available". The proposed small scale dwellings and PSH's will be in keeping with the surrounding developments and

development pattern densities. The retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Visual Sensitivity from KLVP3.

The Landscape Impact would be considered 'Negligible', as "Almost imperceptible or no change in the view as there is little or no loss of / or change to the elements, features or characteristics of the landscape". The retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Landscape Impact from KLVP3.

As per below, the significance of the impact of the proposed development to KLVP3 is considered 'Not Significant'.

		Landscape Impact			
		Large	**Moderate**	**Small**	**Negligible**
Visual Sensitivity	**High**	Major Significance	High Significance	Moderate Significance	Minor Significance
	Medium	High Significance	Moderate Significance	Minor Significance	Not Significant
	Low	Moderate Significance	Minor Significance	Not Significant	Not Significant
	Negligible	Minor Significance	Not Significant	Not Significant	Not Significant

9.2.4 Key Local Vantage Point 4 | Kyogle Road

Kyogle Road Transit
VP Location Coordinates: 28°28'36.13"S | 153°13'53.94"E
Approx. AHD Elevation (Google Earth Data): 95m
Approx. Distance from Subject Site 500m

Key Local Vantage Point 4 is located to the east of the subject site along Kyogle Road. This vantage point was selected for investigation given its elevation (95m), proximity to the site (500m) and potential views (determined by desktop analysis) toward the subject site.

Refer to **Appendix 4** for the plan showing the Local Viewshed from KLVP4 based upon Ground Surface Modelling only.

Key Local Vantage Point 4 Analysis

- Key Local Vantage Point 4 is sited to the east of the subject site. The KLVP has an elevation of AHD 95m. which is approximately 130m lower than the AHD of the highest point of Ridgeline 1 (225m).
- KLVP4 is sited approximately 500m from the subject site at the closest point.
- Only a portion of Major Ridgeline R1 (refer to **Appendix 1** Major Regional Ridgeline Catchments) to the north west is visible from KLVP4. This is due to the

impact of the minor ridgelines that project southward from Major Ridgeline 1 R1.

- No views to the north of Major Ridgeline 1 are visible.
- Based upon the Ground Surface Modelling, only a small portion of 2x DPA's are visible from KLVP4. The existing vegetation plus any additional vegetation works between KLVP4 and the indicated DPA will screen these DPA's from view from KLVP4.
- With a building density average of 1 small scale dwelling per 0.7 hectares within each PDA (1 small scale dwelling per 3.6 hectares averaged across the entire subject site), minimal numbers of proposed small scale dwellings within the PDA's will be visible from KLVP4. Visibility of any proposed small scale dwellings will be further reduced when the locations of existing mature vegetation and potential development vegetation works are considered.

Summary | Significance of Impact

With reference to Table 2.0 Assessment of Receptor Sensitivity of KLVP4 is considered 'Negligible due to "Road" users in motor vehicles that are passing through/adjacent to the study area and have partially screened views and short viewing times'. The proposed small scale dwellings and PSH's will be in keeping with the surrounding developments and development pattern densities. The retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Visual Sensitivity from KLVP4.

The Landscape Impact would be considered 'Negligible', as "Almost imperceptible or no change in the view as there is little or no loss of / or change to the elements, features or characteristics of the landscape". The retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Landscape Impact from KLVP4.

As per below, the significance of the impact of the proposed development to KLVP4 is considered 'Not Significant'.

		Landscape Impact			
		Large	**Moderate**	**Small**	**Negligible**
Visual Sensitivity	**High**	Major Significance	High Significance	Moderate Significance	Minor Significance
	Medium	High Significance	Moderate Significance	Minor Significance	Not Significant
	Low	Moderate Significance	Minor Significance	Not Significant	Not Significant
	Negligible	Minor Significance	Not Significant	Not Significant	Not Significant

9.2.5 Key Local Vantage Point 5 | Private Residence off Private Access Road, Kyogle Road

Private Residence, Private Access Road
VP Location Coordinates: 28°28'43.73"S | 153°13'37.77"E
Approx. AHD Elevation (Google Earth Data): 97m
Approx. Distance from Subject Site 150m

Key Vantage Point 5 is located to the east of the subject site to the north of Kyogle Road. This vantage point was selected for investigation given its elevation (97m), proximity to the site (150m) and potential views (determined by desktop analysis) toward the subject site.

Refer to **Appendix 4** for the plan showing the Local Viewshed from KLVP5 based upon Ground Surface Modelling only.

Key Local Vantage Point 5 Analysis

- Key Local Vantage Point 5 is located to the east of the subject site to the north of Kyogle Road at a distance from the subject site of 150m. The KLVP has an elevation of AHD 97m which is approximately 128m lower than the AHD of the highest point of Ridgeline 1 (225m).

- KLVP5 is located approximately 150m from the subject site.

- Only a portion of Major Ridgeline R1 (refer to **Appendix 1** Major Regional Ridgeline Catchments) to the north and west are visible from KLVP5. This is due to the impact of the minor ridgelines that project southward from Major Ridgeline 1 R1.

- No views to the north of Major Ridgeline 1 are visible.

- Based upon the Ground Surface Modelling, only a small portion of 2x DPA's are visible from KLVP5. The existing vegetation plus any additional vegetation works between KLVP5 and the indicated DPA's will screen these DPA's from view from KLVP5.

- With a building density average of 1 small scale dwelling per 0.7 hectares within each PDA (1 small scale dwelling per 3.6 hectares averaged across the entire subject site), minimal numbers of proposed small scale dwellings within the PDA's will be visible from KLVP5. Visibility of any proposed small scale dwellings will be further reduced when the locations of existing mature vegetation and potential development vegetation works are considered.

Summary | Significance of Impact

With reference to Table 2.0 Assessment of Receptor Sensitivity of KLVP5 is considered 'Negligible' as "Viewers from locations where there is screening by vegetation or structures where only occasional screened views are available". The proposed small scale dwellings and PSH's will be in keeping with the surrounding developments and development pattern densities. The retention of existing vegetation coupled with any

new vegetation works within the DPA's will assist with reducing the Visual Sensitivity from KLVP5.

The Landscape Impact would be considered 'Negligible', as "Almost imperceptible or no change in the view as there is little or no loss of / or change to the elements, features or characteristics of the landscape". The retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Landscape Impact from KLVP5.

As per below, the significance of the impact of the proposed development to KLVP5 is considered 'Not Significant'.

		Landscape Impact			
		Large	**Moderate**	**Small**	**Negligible**
Visual Sensitivity	**High**	Major Significance	High Significance	Moderate Significance	Minor Significance
	Medium	High Significance	Moderate Significance	Minor Significance	Not Significant
	Low	Moderate Significance	Minor Significance	Not Significant	Not Significant
	Negligible	Minor Significance	Not Significant	Not Significant	Not Significant

9.2.6 Key Local Vantage Point 6 | Kyogle Road

Kyogle Road Transit
VP Location Coordinates: 28°29'26.42"S | 153°12'23.72"E
Approx. AHD Elevation (Google Earth Data): 118m
Approx. Distance from Subject Site 490m

Key Local Key Vantage Point 6 is located to the south of the subject site along Kyogle Road. This vantage point was selected for investigation given its elevation (118m), proximity to the site (490m) and potential views (determined by desktop analysis) toward the subject site.

Refer to **Appendix 4** for the plan showing the Local Viewshed from KLVP5 based upon Ground Surface Modelling only.

Key Local Vantage Point 6 Analysis

- Key Regional Vantage Point 6 is located to the south of the subject site along Kyogle Road at a distance from the subject site of490m. The KLVP has an elevation of AHD 118m which is approximately 107m lower than the AHD of the highest point of Ridgeline 1 (225m).

- Only a portion of the Major Ridgeline R1 (refer to **Appendix 1** Major Regional Ridgeline Catchments) to the north is visible from KLVP6. This is due to the impact of the minor ridgelines that project southward from Major Ridgeline 1 R1.

- No views to the north of Major Ridgeline 1 are visible.

- Based upon the Ground Surface Modelling, only a small portion of 2x DPA's are visible from KLVP6. The existing vegetation plus any additional vegetation works between KLVP6 and the indicated DPA's will screen these DPA's from view from KLVP6.

- With a building density average of 1 small scale dwelling per 0.7 hectares within each PDA (1 small scale dwelling per 3.6 hectares averaged across the entire subject site), minimal numbers of proposed small scale dwellings within the PDA's will be visible from KLVP6. Visibility of any proposed small scale dwellings will be further reduced when the locations of existing mature vegetation and potential development vegetation works are considered.

Summary | Significance of Impact

With reference to Table 2.0 Assessment of Receptor Sensitivity of KLVP6 is considered 'Negligible due to "Road" users in motor vehicles that are passing through/adjacent to the study area and have partially screened views and short viewing times'. The proposed small scale dwellings and PSH's will be in keeping with the surrounding developments and development pattern densities. The retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Visual Sensitivity from KLVP6.

The Landscape Impact would be considered 'Negligible', as "Almost imperceptible or no change in the view as there is little or no loss of / or change to the elements, features or characteristics of the landscape". The retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Landscape Impact from KLVP6.

As per below, the significance of the impact of the proposed development to KLVP6 is considered 'Not Significant'.

		Landscape Impact			
		Large	**Moderate**	**Small**	**Negligible**
Visual Sensitivity	**High**	Major Significance	High Significance	Moderate Significance	Minor Significance
	Medium	High Significance	Moderate Significance	Minor Significance	Not Significant
	Low	Moderate Significance	Minor Significance	Not Significant	Not Significant
	Negligible	Minor Significance	Not Significant	Not Significant	Not Significant

9.2.7 Key Regional Vantage Point 7 | Private Residence, Mt Burrell Road

Private Residence, Mt Burrell Rd
VP Location Coordinates: 28°29'14.09"S | 153°12'59.16"E
Approx. AHD Elevation (Google Earth Data): 126m
Approx. Distance from Subject Site 150m

Key Local Vantage Point 7 is located to the south of the subject site and to the south of Kyogle Road. This vantage point was selected for investigation given its elevation (126m), proximity to the site (150m) and potential views (determined by desktop analysis) toward the subject site.

Refer to **Appendix 4** for the plan showing the Local Viewshed from KLVP5 based upon Ground Surface Modelling only.

Key Local Vantage Point 7 Analysis

- Key Regional Vantage Point 7 is located to the south of the subject site and to the south of Kyogle Road at a distance from the subject site of 150m. The KLVP has an elevation of AHD 126m which is approximately 119m lower than the AHD of the highest point of Ridgeline 1 (225m).

- Only a portion of the Major Ridgeline R1 (refer to **Appendix 1** Major Regional Ridgeline Catchments) to the west and north is visible from KVP7. This is due to the impact of the minor ridgelines that project southward from Major Ridgeline 1 R1.

- No views to the north of Major Ridgeline 1 are visible.

- Based upon the Ground Surface Modelling, only a small portion of 2x DPA's are visible from KLVP7. The existing vegetation plus any additional vegetation works between KLVP7 and the indicated DPA's will screen these DPA's from view from KLVP6.

- With a building density average of 1 small scale dwelling per 0.7 hectares within each PDA (1 small scale dwelling per 3.6 hectares averaged across the entire subject site), minimal numbers of proposed small scale dwellings within the PDA's will be visible from KLVP7. Visibility of any proposed small scale dwellings will be further reduced when the locations of existing mature vegetation and potential development vegetation works are considered.

Summary | Significance of Impact

With reference to Table 2.0 Assessment of Receptor Sensitivity of KLVP7 is considered 'Medium' as "occupiers of residential properties with long viewing periods, at a distance from or screened from the Project Area". The proposed dwellings and PSH's will be in keeping with the surrounding developments and development pattern densities. The retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Visual Sensitivity from KLVP7.

The Landscape Impact would be considered 'Small', through minor loss with the introduction of elements that may be visible but may not be uncharacteristic within the existing landscape. Whilst minimal, the retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Landscape Impact from KLVP7.

As per below, the significance of the impact of the proposed development to KLVP7 is considered 'Minor Significance'.

		Landscape Impact			
		Large	**Moderate**	**Small**	**Negligible**
Visual Sensitivity	**High**	Major Significance	High Significance	Moderate Significance	Minor Significance
	Medium	High Significance	Moderate Significance	Minor Significance	Not Significant
	Low	Moderate Significance	Minor Significance	Not Significant	Not Significant
	Negligible	Minor Significance	Not Significant	Not Significant	Not Significant

9.2.8 Key Local Vantage Point 8 | Private Residence, Waratah Ct

Private residence, Waratah Ct
VP Location Coordinates: 28°29'15.71"S | 153°13'19.36"E
Approx. AHD Elevation (Google Earth Data): 105m
Approx. Distance from Subject Site 210m

Key Local Vantage Point 8 is located to the south of the subject site and south of Kyogle Road. This vantage point was selected for investigation given its elevation (105m), proximity to the site (210m) and potential views (determined by desktop analysis) toward the subject site.

Refer to **Appendix 4** for the plan showing the Local Viewshed from KLVP8 based upon Ground Surface Modelling only.

Key Local Vantage Point 8 Analysis

- Key Regional Vantage Point 8 is located to the south of the subject site and to the south of Kyogle Road at a distance from the subject site of 210m. The KLVP has an elevation of AHD 105m which is approximately 120m lower than the AHD of the highest point of Ridgeline 1 (225m).

- Only a portion of the Major Ridgeline R1 (refer to **Appendix 1** Major Regional Ridgeline Catchments) to the west and north is visible from KVP8. This is due to the impact of the minor ridgelines that project southward from Major Ridgeline 1 R1.

- No views to the north of Major Ridgeline 1 are visible.

- Based upon the Ground Surface Modelling, only a small portion of 2x DPA's are visible from KLVP8. The existing vegetation plus any additional vegetation works between KLVP8 and the indicated DPA's will screen these DPA's from view from KLVP8.

- With a building density average of 1 small scale dwelling per 0.7 hectares within each PDA (1 small scale dwelling per 3.6 hectares averaged across the entire subject site), minimal numbers of proposed small scale dwellings within the PDA's will be visible from KLVP8. Visibility of any proposed small scale dwellings will be further reduced when the locations of existing mature vegetation and potential development vegetation works are considered.

Summary | Significance of Impact

With reference to Table 2.0 Assessment of Receptor Sensitivity of KLVP8 is considered 'Medium' as "occupiers of residential properties with long viewing periods, at a distance from or screened from the Project Area". The proposed small scale dwellings and PSH's will be in keeping with the surrounding developments and development pattern densities. The retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Visual Sensitivity from KLVP8.

The Landscape Impact would be considered 'Small', through minor loss with the introduction of elements that may be visible but may not be uncharacteristic within the existing landscape. Whilst minimal, the retention of existing vegetation coupled with any new vegetation works within the DPA's will assist with reducing the Landscape Impact from KLVP8.

As per below, the significance of the impact of the proposed development to KLVP8 is considered 'Minor Significance'.

		Landscape Impact			
		Large	**Moderate**	**Small**	**Negligible**
Visual Sensitivity	**High**	Major Significance	High Significance	Moderate Significance	Minor Significance
	Medium	High Significance	Moderate Significance	Minor Significance	Not Significant
	Low	Moderate Significance	Minor Significance	Not Significant	Not Significant
	Negligible	Minor Significance	Not Significant	Not Significant	Not Significant

10.0 Summary & Conclusions

An initial desktop analysis of regional landforms and a site investigation of local viewsheds along Kyogle Road adjacent to the subject site were undertaken to assess the potential impact of the PDA's in respect to both a Regional and Local viewpoint perspective.

- A Regional Key Vantage Points Plan (refer **Appendix 3**) was determined through a topographical analysis which identified 4x Key regional viewpoints from where the PDA's can be viewed. The subject site was determined to be located across a Major Ridgeline (R1) which broadly separated the subject site into 2x Visual Catchments, VC1 to the south and VC2 to the north. Subsequent analysis of topography and view sheds indicates that this Major Ridgeline does not screen VC1 from the 4x KRVP's.

- Through a combination of desktop topographical analysis and local site investigations, 8x Key Local viewpoints were identified from where the various subject site PDA's can be viewed from along either Kyogle Road or from surrounding existing residential developments. Approximately 47% of the PDA's are sited to the south of R1 within VC1. The Major Ridgeline (R1) in conjunction with a series of minor ridgelines extending southward from R1 screened any views to VC2 and limited views across VC1 from both Kyogle Road and surrounding existing residential developments.

- While no defined AHD for any structure heights have been determined, a PSH of 8m above existing ground levels has been established for all future residential dwellings developed within the subject site.

- The primary influencing landform features effecting the local viewsheds was determined as the Major Ridgeline (R1). This restricted the viewshed of the PDA's to the north of R1 from both Kyogle Road transit corridor and the surrounding residences to either side of Kyogle Road.

- This viewshed analysis informed the identification of 4x key regional vantage points and 8x key local vantage points located within the area of investigation for further investigation. Verification of these Key Regional Vantage Points (KRVP) and Key Local Vantage Points (KLVP) was made through site inspections and photographs recorded where relevant to provide a representation of typical views from KRVP4 and keys points along the Kyogle Road transit corridor toward the subject site.

The significance of impact of the PDA's to both the Regional and Local KVP's was evaluated using a combination of landscape impact and visual impact parameters as identified and described by the Landscape Institute and Institute for Environmental Management and Assessment.

Landscape impacts refer to the relative capacity of the landscape to accommodate changes to the physical landscape of the type and scale proposed that would occur

as a direct result of the proposal, through the introduction of new features or loss/modification of existing features. Visual impacts arise from changes in available views of the landscape that occur as a result of the proposal. Visual impact is determined through the subjective assessment of sensitivity of the visual receptors (i.e. residents, outdoor recreational users) and the magnitude (scale) of the change in view. Predicted impacts as a direct result of the proposal were determined according to their significance, which is a function of the magnitude of the impact and the sensitivity of the receptor.

Through detailed analysis of the 4x) identified KRVP's located within the area of investigation it has been determined that the significance of the impact of the proposed development to all 4x KRVP's is of 'Minor Significance'.

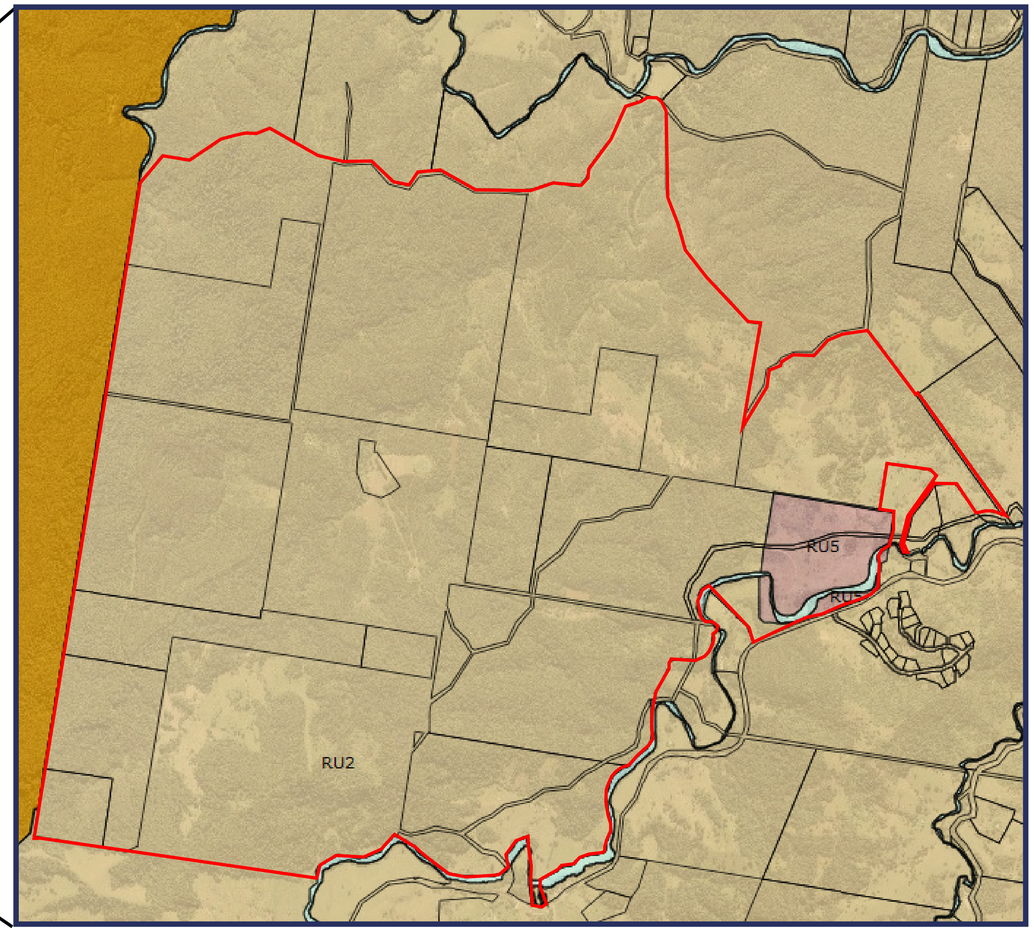
Through detailed analysis of the 8x identified KRVP's located within the area of investigation it has been determined that the significance of the impact of the proposed development to 3x KLVP's is of 'Minor Significance', being KLVP's numbers 1, 7 & 8, and that the significance of the impact to the remaining 5x KLVP's is 'Not Significant'.

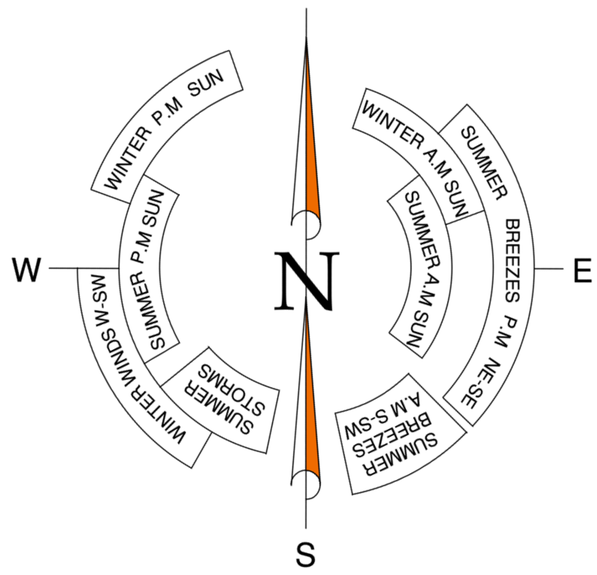
This conclusion has been determined by the evaluation of each KRVP and KLVP individually, and as such, the specific determining factors relate to the context of each KRVP and KLVP individually. It is noted however that the location of the PDA's within dense vegetation plays a significant role in mitigating any potential negative impact from all KLVP's investigated. This dense vegetation associated with ridge line 1 conceals the majority of the PDA's sited to the south of R1 and all of the PDA's sited to the north of R1.The visibility of the PDA's from the 4x KRVP's represents a visually insignificant portion of the views available to vantage points within the area of investigation.

The proposed PDA's coupled with the proposed Nightcap on Minjungbul Architectural Design Guidelines is not out of character within the existing rural residential development that features prominently within the area of investigation.

APPENDIX 01

DEVELOPMENT CONTEXT PLANS

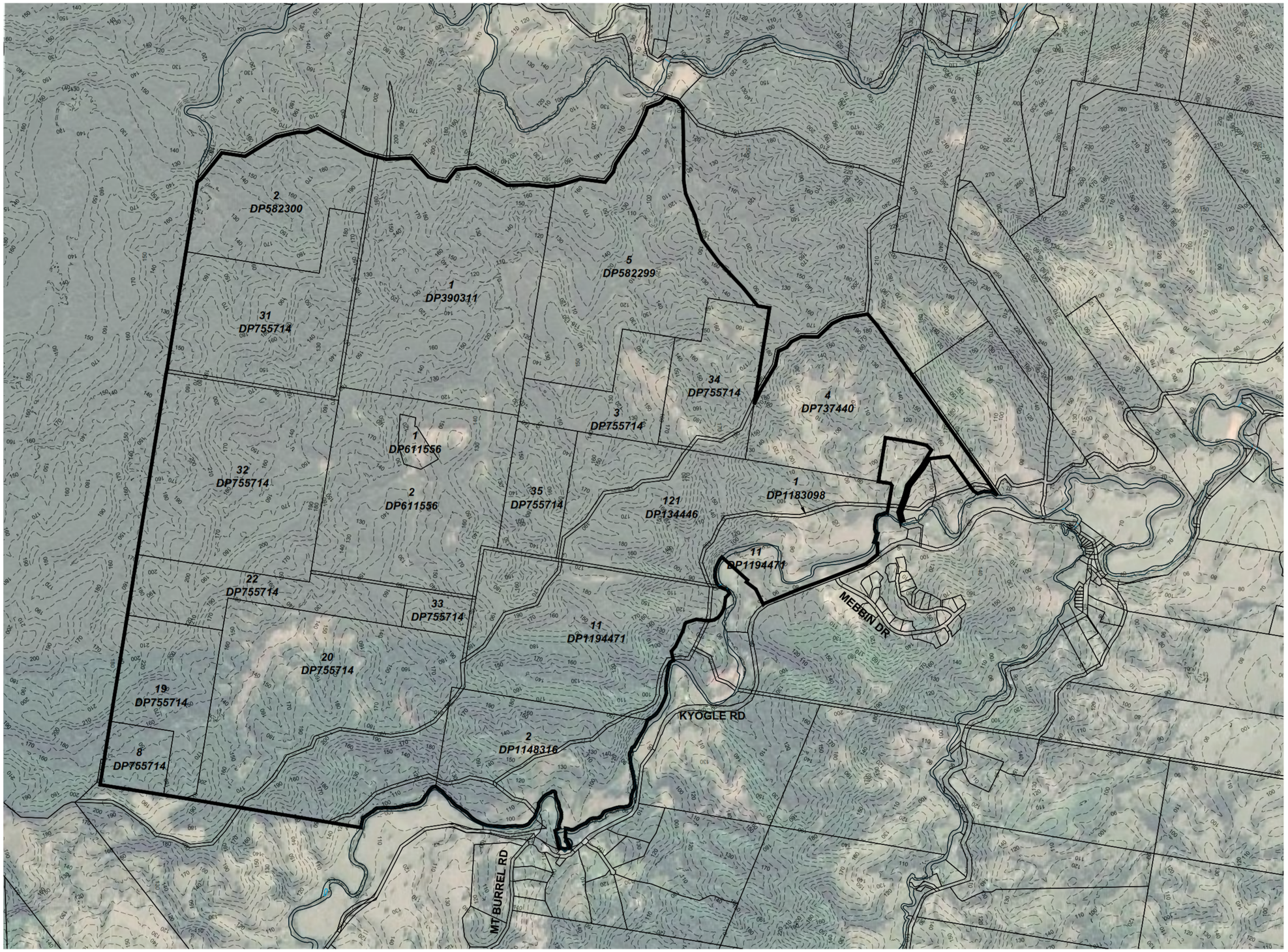




PLANIT CONSULTING

LEGEND

N



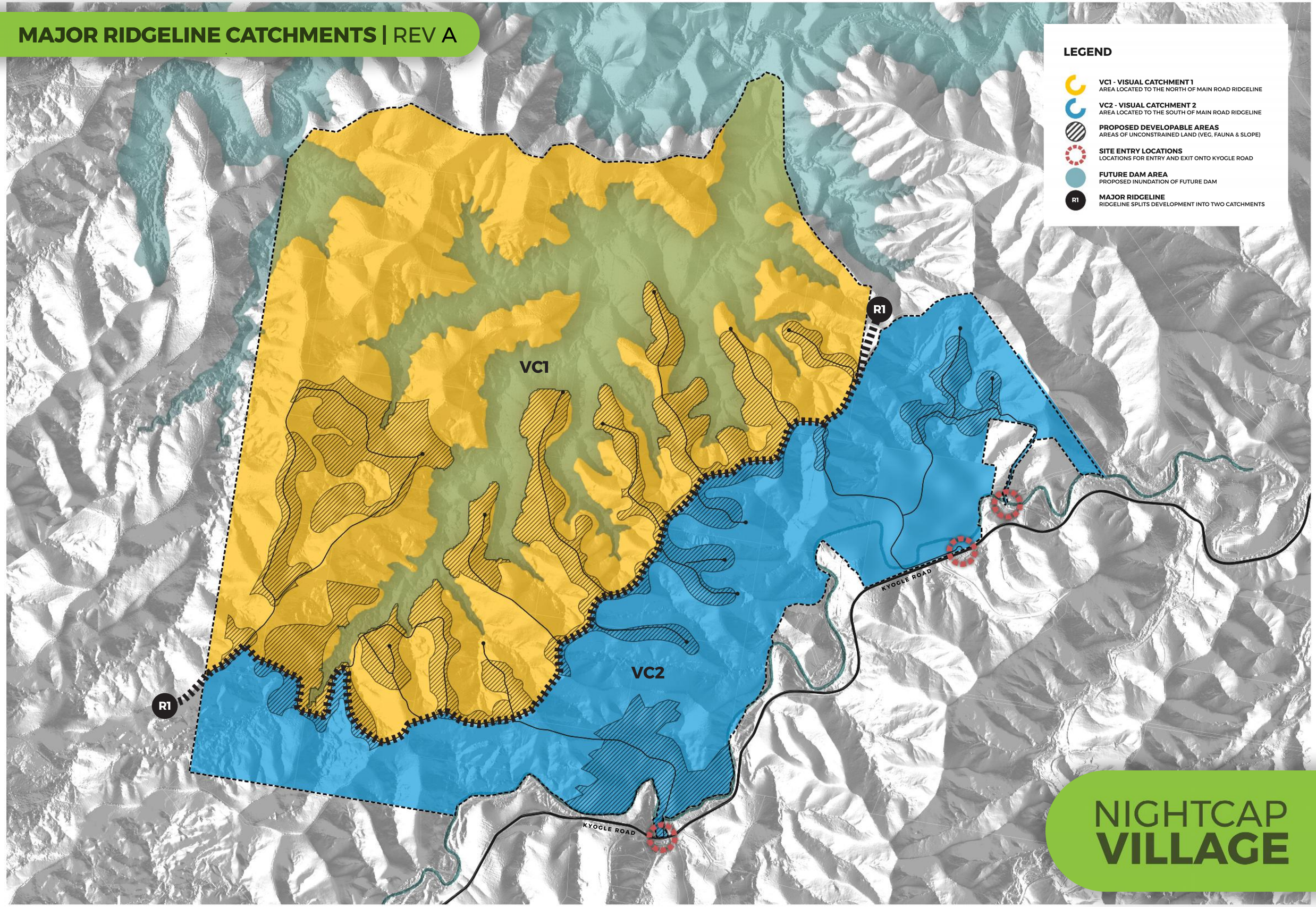
PLANIT CONSULTING

0 250 500 750

LOCALITY PLAN | REV A

NIGHTCAP VILLAGE

MAJOR RIDGELINE CATCHMENTS | REV A



NIGHTCAP
VILLAGE

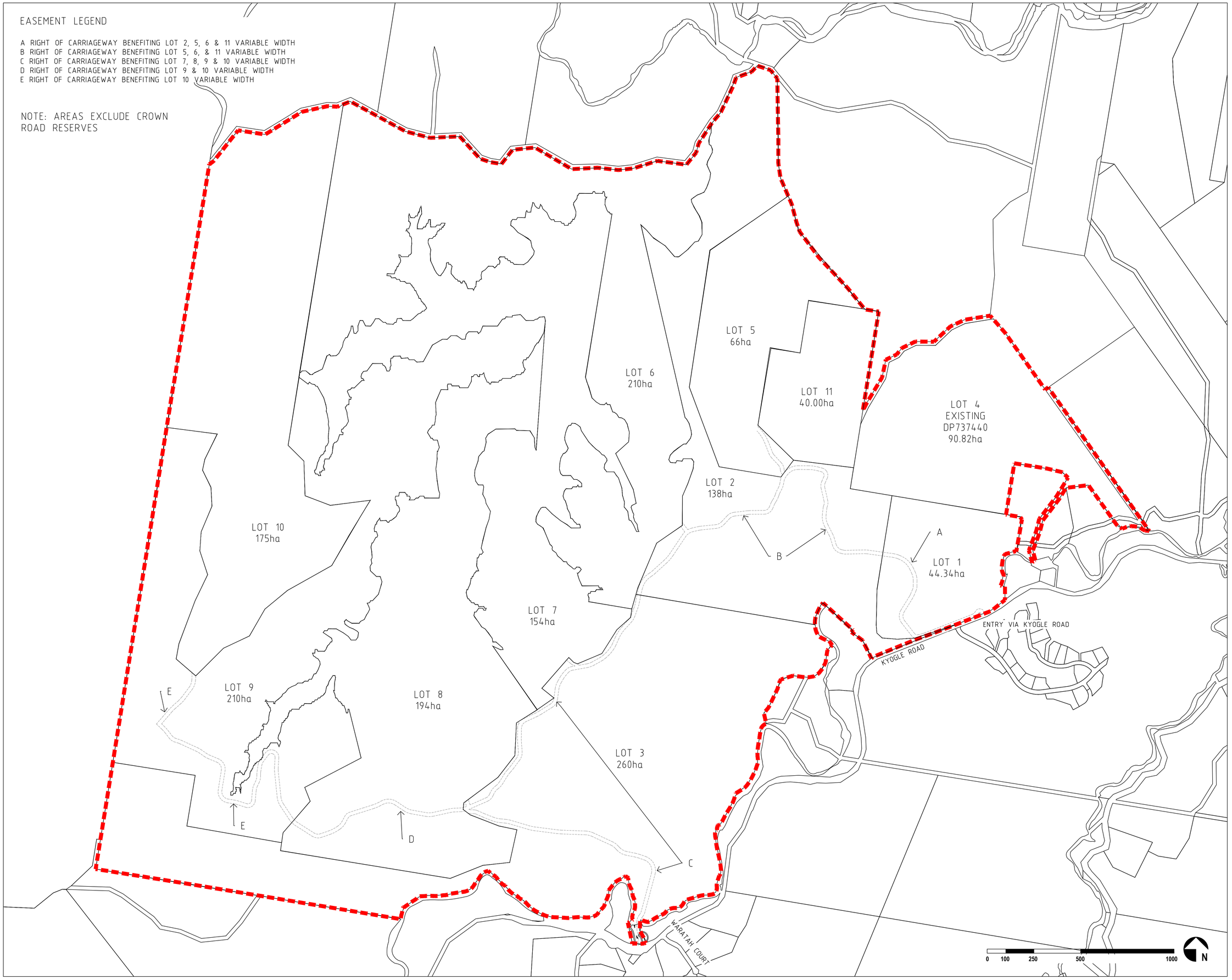
APPENDIX 02

LOT PLAN AND LOT AREAS

EASEMENT LEGEND

A RIGHT OF CARRIAGEWAY BENEFITING LOT 2, 5, 6 & 11 VARIABLE WIDTH
B RIGHT OF CARRIAGEWAY BENEFITING LOT 5, 6, & 11 VARIABLE WIDTH
C RIGHT OF CARRIAGEWAY BENEFITING LOT 7, 8, 9 & 10 VARIABLE WIDTH
D RIGHT OF CARRIAGEWAY BENEFITING LOT 9 & 10 VARIABLE WIDTH
E RIGHT OF CARRIAGEWAY BENEFITING LOT 10 VARIABLE WIDTH

NOTE: AREAS EXCLUDE CROWN ROAD RESERVES



PLANIT CONSULTING

PROJECT TITLE
NIGHTCAP RURAL LAND SHARING COMMUNITIES CONCEPT

DRAWING TITLE
SUBDIVISION PLAN

BASE ISSUED BY

SCALE
REFER TO SCALE BAR

DESIGN
JI

DRAWN
JI

DATE
29/07/2020

CHECKED
DM

DRAW NO
1

SHEET NO
1

1	27/11/19	SUBDIVISION PLAN	JI
2	29/07/20	SUBDIVISION PLAN	SW

LEGEND

SITE BOUNDARIES
EASEMENT
LOT BOUNDARIES

Level 1 2247 Gold Coast Hwy
Nobby Beach
PO Box 206 QLD 4218

Telephone: 07 5526 1500
Fax: 07 5526 1502
Email: admin@planitconsulting.com.au

APPENDIX A: LOT NUMBERS AND AREAS

Existing Lots				Proposed Lots			
Lot / DP	Area (ha)	SEPP Calc	Dwellings	Lot / DP	Area (ha)	SEPP Calc	Dwellings
121 / DP134446	158.17	41.043	41	Lot 1	44.34	N/A Village	-
3 / DP755714	37.939	10.985	10	Lot 2	200.1	42.5	42
5 / DP582299	134.1	35.025	35	Lot 3	260	62.3	62
4 / DP737440	90.82	24.205	24	Lot 4 (Existing)	90.82	24.205	24
1 / DP390311	162.27	42.068	42	Lot 5	42.2	12.05	12
35 / DP755714	30.7561	9.1890	9	Lot 6	210	54	54
20 / DP755714	177.25	45.813	45	Lot 7	154	40	40
33 / DP755714	9.9047	N/A	0	Lot 8	194	50	50
2 / DP611556	122.4	32.1	32	Lot 9	210	54	54
34 / DP755714	47.04	13.26	13	Lot 10	175	45.25	45
1 / DP611556	5.075	N/A	0	Lot 11	40	11.5	9
2 / DP582300	71.71	19.428	19				
31 / DP755714	89.031	23.758	23				
32 / DP755714	125.453	32.863	32				
22 / DP755714	46.5388	13.135	13				
19 / DP755714	48.5623	13.641	13				
8 / DP755714	16.187	5.547	5				
11 / DP1194471	126.6	33.15	33				
2 / DP1148316	81.51	21.878	21				
1 / DP1183098	3.023	N/A	0				
2 / DP1235488	0.04	N/A	0				
Total Lots	21	Area	1584ha	Total Lots	11	Area	1584ha
Dwellings achievable (excl. Village lot)			410	Dwellings achievable (excl. Village lot)			392